

## DISEASES

OF THE

## CHEST

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## Editorial Comment

READER'S  
COMMENT

Philadelphia, Pa.

June 20th, 1939.

"To the Editor:

"The Editorial Comment, *The Facts and Significance of the Tuberculin Test*, in the June issue carries much significance. 'If a tuberculin test were performed on every human being and all the positive reactors given an x-ray examination—then practically every case of tuberculosis would be discovered.' (This statement has confirmative illustration in the practical extinction of tuberculosis in cattle where the positive reactors can be destroyed, and in the Philadelphia Zoological Gardens where Doctor Herbert Fox allows no new Simian reacting positively to tuberculin to become a member of the monkey colony). 'The expense of such an undertaking is, of course, prohibitive.'

"Such a broad, truthful and significant statement as this calls for serious thought. Wonderful as it would be as a health measure to discover every case of tuberculosis, the magnitude of the undertaking places it in the category of dreams rather than accomplishments. Since we are unable to do it, is there not something that in a smaller way we can do to secure the same results? We know the death rate from tuberculosis has not declined in the young female group in the same ratio that it has in the young male group nor

in the general population. The young female group is numerically large but it is not so large that it would be impossible to carry out a survey that would surely result eventually in a reduction of its tuberculosis mortality. Let us make this case-finding survey in this group then. Education and Industry contribute a high percentage to this group. The laity is certainly not, and the general practitioner but little more so, tuberculin and x-ray-minded to make such an undertaking simple and easy. We would probably have to go back to our former campaigning to educate. The results of vaccination against small pox, and of diphtheria immunization are no more preventive health measures than "case-finding" in tuberculosis and yet on account of its long duration the economic burden is greatest in tuberculosis. X-raying, of course, is the greater cost in tuberculosis case-finding.

"In a letter such as this it would be out of bounds to discuss ways and means. For the present the idea, then its elaboration. It is wonderful to be able to anticipate *clinical* tuberculosis and as progressive physicians we should use the knowledge we possess. The editorial's lucid exposition is certainly an urge for practical disposition. It can be done—let us do it.

"Alex. Heron Davisson, M.D."

The above comment by Dr. Davisson is very

interesting. His suggestion deserves profound thought. Many may not believe in wholesale skin testing—others may. Further comments on this subject by our fellows and readers are welcome. Certainly the age group, 15-25 needs special consideration.

C. M. H.

**PROPER USE OF EMPTY BEDS IN HOSPITALS**

Copies of the following letter were received by the Tuberculosis Clinics in Philadelphia which are under the City Department of Health.

**"PHILADELPHIA HOSPITAL FOR CONTAGIOUS DISEASES**

August 17, 1939.

"Dear Dr. Brumm:

"Permission has been granted by Dr. Nassau to have all active tuberculous cases under 12 years of age admitted to this hospital. Formerly these cases were sent to the Philadelphia General Hospital and then transferred here.

"It is understood, of course, that this does not include the so-called preventorium type of case. I believe it would be advisable for you to notify all hospitals and chest clinics under your supervision of this change. Will you please stress the importance of having positive clinical and laboratory findings, together with a copy of the record in each case, before being transferred here.

"I propose to admit these cases through the Bureau of Health or whatever means you may suggest. Transportation will be furnished by this hospital only when necessary.

"Respectfully yours,

*P. F. Lucchesi, M.D.,*

Superintendent."

This utilization of empty beds in a hospital for contagious diseases to treat tuberculosis in children who are infectious has a two fold benefit. The immediate benefit is, of course, to the sick child and his contacts. But just as important is the recognition of the fact that tuberculosis is infectious and deadly and should no more be roaming the streets than leprosy or smallpox.

With the diminution of other infectious diseases, many hospitals for contagious diseases have many empty wards. It is hoped that their utilization to cure and segregate infectious cases of tuberculosis in children will become general where there are insufficient beds in tuberculosis sanatoria to take care

of them.

Dr. Charles F. Nassau, Director of the Department of Health of the City of Philadelphia, Dr. P. F. Lucchesi, Medical Director of the Philadelphia Hospital for Contagious Diseases, and Dr. Seth Brumm, Chief of the Division of Tuberculosis of the Department of Health, are to be congratulated upon taking a forward step in municipal tuberculosis cure and prevention. A Public Health office is a most sacred trust.

F. W. B.

**TUBERCULOSIS HAS GONE TO SCHOOL**

Tuberculosis has gone to school, and is graduating—a highly specialized product. It no longer belongs to backwoods days and to backwood ways. No longer is it enrolled in the humble "district schule"; but is marching forth from the shiny marble halls of a great university. Yes, tuberculosis has gone to school—it has been educated. No more will it be content with primitive methods; with the advice of tonics, take it easy, lie up in bed and stuff with raw eggs and milk, etc., etc. No indeed! Rather it demands, now that it can boast of a new learning, all the skill and treasures of modern medical science.

Yes, pulmonary tuberculosis today, has taken its rightful place in the unholy scheme of things; and exacts all the scientific and specialized knowledge of modern medicine and surgery for its treatment and control. This knowledge is now available, and must be applied if this scourge of the human family is to be annihilated. The nihilism of yesterday with its late diagnosis and passive treatment is gone. Today, there is needed, and being utilized, the combined efforts, experience, skill and knowledge of the phthisiologist, thoracic surgeon, radiologist and bronchoscopist.

However, the general doctor is still a vital cog in the wheel of the present day tuberculosis campaign. Without him it would utterly fail and collapse. For it is he who usually sees the patient first, and it is by him that the future course and destiny of his patient is charted. The specialist needs the doctor in general practice, and the doctor needs the specialist.

Yes!—tuberculosis has gone to school.

C. H. H.

## DISEASES OF THE CHEST

**"THE AWAKENING"**

Civilization is gradually awakening to the realization that one of its greatest, if not the greatest, scourges can be annihilated. Sleep still fills the eye—the hypnotic has not yet completely worn off—but the awakening has begun. The goal still lies far removed; but powerful forces are beginning to be placed in operation. It does truly seem that the potentialities for ridding the world of the tuberculosis menace, for sweeping it from the face of the earth, are rapidly being developed.

Such a victorious culmination, however, is not just at hand. The road will probably be a long and arduous one; the pit-falls, detours and obstacles, many. Patience, perseverance and fortitude will be demanded; stupendous efforts required. The task is great, the cause worthy and the final reward a world's blessing.

With an enlarged and enlarging experience, with more scientific and purified preparations, an infection by the tubercle bacillus can be detected with a very high degree of accuracy, and as shortly as three to five weeks after it has taken place. This invaluable information is rendered by the intra-cutaneous tuberculin test.

Improved equipment and more perfected technique places in our hands the greatest asset for the early and accurate diagnosis of tuberculosis—the x-ray examination.

Improved methods of concentration, animal inoculation and culture are furthering the demonstration of tubercle bacilli in the open cases. The increasing number of beds for the tuberculous, and the continued advances in collapse therapy are greatly aiding in the segregation of the open cases, and the conversion of many of them into closed ones.

Tuberculosis surveys, employing the tuberculin test and the x-raying of the positive reactors, is becoming increasingly the order of the day. Schools, colleges and industry are rapidly seeing the rationale and wisdom of these case finding campaigns and are co-operating with a fine support.

Civilization is gradually awakening, gradually becoming tuberculosis conscious and slowly but definitely beginning to realize that the destruction of the mortal enemy, the grim reaper, is now looming as a distinct possibility. May it so be!

C. H. H.

**FACTS VERSUS THEORIES**

A child in a home where there is a positive sputum case usually becomes infected, begets a positive tuberculin reaction after three weeks and is, therefore, allergic to tuberculosis. After becoming allergic, the child continues to be reinfected, probably daily, for years. Yet the child does not usually develop the adult type of infection until many years later. How illogical then, to ascribe to exogenous, or outside, reinfection, that which happens later in the lung and try to explain the adult type of lesion to new infection falling on allergic tissue. New infection has been falling on that allergic tissue for perhaps twenty years, but not until some unknown change occurs, often at an age that is common to a family, does the adult type of tuberculosis usually appear.

Judging by the destruction of families unprotected by the removal of positive sputum cases from the home, we are entitled to expect severe cases later from heavy, prolonged infection.

The only hope of not reaping what has been plentifully sown is treatment of the infected child. That treatment is simple and inexpensive. It consists of abundant rest, food, sunshine, clean air, and above all, a period free from any new infection while the old infection is being eliminated.

The tuberculosis death rate has been falling. That fall has almost stopped since preventoriums have begun to be abandoned. Bring back the preventorium for the positive tuberculin child who is under-nourished in the slums or you will see the death rate rise.

F. W. B.

**PENNSYLVANIA PLAN DOES IT AGAIN**

We are proud to point to one more product of the Pennsylvania Plan—the September issue of "Northwestern Medicine." This particular issue was conceived and promoted by the Tuberculosis Committees of Oregon, Washington and Idaho, which were established along the lines laid down by the Pennsylvania Plan.

The entire issue is given over to tuberculosis, and will bring forcibly to the physicians of the Northwest the facts concerning early diagnosis and treatment.

C. M. H.



## The Pennsylvania Plan\*

RALPH C. MATSON, M.D., F.A.C.P., F.A.C.S.\*\*

Portland, Oregon

**E**VEN before the discovery of the tubercle bacillus, innumerable systems have been proposed and devised for case finding and coordination of the various agencies engaged in combating tuberculosis.

But after subjecting these diverse programs to experiment, it seems convincing that the one most adequate for the situation today is the so-called Pennsylvania Plan, which has clearly demonstrated its value in the widespread educational campaigns and well grounded preventative work both achieved and stimulated.

The superiority of the Pennsylvania Plan is verified by the results obtained through the organized committee of the American College of Chest Physicians. When it began its work one year ago, there were only 7 states organized on the basis of this project, while now 32 states (including the Philippines) have either wholly adopted the Pennsylvania Plan or evolved a parallel one with modifications.

The Pennsylvania Plan according to Dr. Frank Walton Burge, in his presentation on "The Treatment of Tuberculosis Under the Guidance of Organized Medicine," consists of:

## I. Case Finding

**A. Education of the Public.** A considerable sum is necessary for educating the public in the problem of tuberculosis. The sale of Christmas seal stamps has been successfully utilized in the interests of this cause. Dr. Burge points out that in Pennsylvania, since adoption of the Pennsylvania Plan, there has been no lack of cooperation with the National Tuberculosis Association and its component societies, whereby the public has benefited greatly. He further cites that the organized

facilities of the Philadelphia Health Council and Tuberculosis Committee, the local component society of the National Tuberculosis Association, have been freely extended to advance many activities of the Philadelphia County Medical Society.

**B. Education of the Medical Profession.** 1. Education of the Medical Profession in the Medical School. During the last few years, in order to better the teaching of diseases of the chest, a committee of the American College of Chest Physicians has been appointed to work out a plan to standardize the teaching of chest diseases in the medical schools. But there is much to be desired in the uniformity of time allowed this subject; some medical schools altogether lack a course of this nature taught by a lung specialist.

2. Education of the medical profession in the practice of medicine.

(a) The American Review of Tuberculosis, the foremost scientific publication on tuberculosis for the chest specialist and research worker.

(b) Diseases of the Chest, a concise as well as practical monthly journal with contributions by specialists in the field. Early diagnosis and modern means of therapy are its basic purposes. The Pennsylvania Plan aspires to have this journal go to every practicing physician each month, its present monthly circulation being 10,000. The articles are mainly written for general practitioners.

(c) Physicians may have reprints and abstracts on request.

(d) Every medical meeting to include a well-rounded tuberculosis program. All organizations (the tuberculosis committees of state and county medical societies, the National Tuberculosis Association and its component societies, and the American College of Chest Physicians) must cooperate fully to realize the presentation of the greatest possible number of outstanding papers on tuberculosis before the largest number of medical meetings.

**C. Education of the State Legislators.** All members of both houses of the state legislature must be made aware of all phases of

\* This article is being presented at the special request of Dr. Benjamin Goldberg, Chairman of the Committee for the Advancement of Tuberculosis Organization in Medicine. In its preparation, Dr. Frank Walton Burge's paper *The Treatment of Tuberculosis Under the Guidance of Organized Medicine* has been quoted extensively.

\*\*President, American College of Chest Physicians; Chairman of the Committee for the Advancement of Tuberculosis Organization in Medicine.



the Pennsylvania Plan and kept informed of every advancement under it, for the plan is highly dependent upon the state legislative assembly to appropriate the necessarily large funds for its ultimate realization. The tuberculosis committee of each county medical society is appointed to communicate all aspects of development to every state representative and senator in the county, revealing state requirements in case finding, case treatment, and rehabilitation. Similar responsibility rests on each member of the tuberculosis committee of the state medical society for every legislator in his councillor district. To achieve close cooperation with the legislative committee of the state medical society, the tuberculosis committee of the state medical society must keep the former fully informed of all the legislative needs under the Pennsylvania Plan.

#### *D. Method and Proper Cost of Case Finding.*

Here much difference in opinion exists, the variance due mostly to the fact that a method which is effective and economical in an area with a low incidence of tuberculosis may be ineffectual and extravagant in an area where the percentage of persons with a positive reaction to tuberculin is high. Also a method satisfactory for one age group is inappropriate for all age groups. Under the Pennsylvania Plan the following principles of case finding are recognized:

1. The maintenance of a constant follow-up in the home, by nurses specializing in tuberculosis, of persons who have been in contact with patients known to be tuberculous or persons who have died of tuberculosis, together with the maintenance of thoroughly distributed tuberculosis clinics, out of which the nurse operates. This has proved the least costly and most practical means of case finding in public health work. Another requirement is housing and staffing of the clinic with a competent tuberculosis specialist of excellent local reputation and trained in artificial pneumothorax. Fluoroscope and pneumothorax apparatus are of course necessary to carry out the work, without which case finding would be of no avail.

2. Tuberculin tests should be followed by roentgenograms in cases with positive reaction in (a) areas where the percentage of positive reactors is very low and in (b) special

groups in which the incidence of active adult type tuberculosis is high.

In these special groups, such as the age group from 16 to 24 years, racial groups, slum area groups, certain occupational groups, and others in which the incidence of the active, adult type of tuberculosis is high, surveys by the inexpensive paper film method are applicable.

The Pennsylvania health department is equipped with two motorized x-ray field units; each unit is accompanied by a trained roentgenologist and a technician and is sent into the counties for use with first year high school students in all schools. Examination of children calls for parental consent. As the first step in examination, the student is given the Mantoux test, and roentgenograms are taken of all those with a positive reaction. The films are sent to the x-ray laboratory at the end of the day's work, and reports of the findings are relayed to parents and family physician.

Dr. Burge observes that in the first six counties visited by this unit in 1936, 50 per cent of the parents consented to have their children given the test. Of 37,485 ninth grade children examined in 40 counties, 11.3 per cent gave positive reactions and approximately 155 showed symptoms of active tuberculosis.

First year and senior students at the state teacher's college were examined, among which five hundred positive reactions were found, thus preventing teachers with tuberculosis from coming in contact with students in public schools.

## *II. Case Treatment*

The set-up of the Pennsylvania Plan as operated in Pennsylvania is as follows: A. Leader of the plan (The Secretary of Health in Pennsylvania). B. A tuberculosis committee of the Pennsylvania State Medical Society, with 12 members, whose function it is to coordinate the activities of the county committees. C. Tuberculosis committees in each of the sixty county medical societies of the state.

The plan calls for proper living quarters for sanatorium physicians with at least one physician to each 50 patients. It secures sanatorium employees their jobs, provides salaries for physicians at least equal to those in the army and navy with a rising scale, and pro-

vides sufficient nurses, ward maids and orderlies to do the work of the institution, since it is recognized by organized medicine that patient labor in the sanatorium is contrary to rehabilitation and that abuses and bias of judgement are inevitable on the part of physicians when work in the sanatorium must be performed by patients.

Tuberculosis sanatorium building on a large scale is part of Pennsylvania's program, as well as a raise of about 50 per cent in the base pay of physicians, and an increase in wages of other sanatorium employees.

Examining patients fluoroscopically before pneumothorax refills is a recently established practice, as this examination prevents loss of pneumothorax collapse, together with early detection of complications and avoidance of such.

### III. Rehabilitation

In connection with rehabilitation, an oc-

cupation should be chosen which, in case the patient's disease became active and sputum positive, his vocation would not be menacing public health.

Definite cure is necessary before rehabilitation is attempted and once cured, the patient should be sent home, as rehabilitation can be carried out most inexpensively there. The cured patient should not be occupying a bed needed by the sick.

Through motorized x-ray apparatus, such as purchased by the Pennsylvania Health Department, it should soon be possible to subject every high school student to a skin test and roentgenological examination. This will be a noteworthy accomplishment in organized medicine devoted to thoracic disease.

While the progress of this enterprise may be slow, the response has already been so marked that it is quite obvious through statistics that most states are eager to undertake the Pennsylvania Plan.

## Extrapleural Pneumothorax\*

I. COSIO VILLEGAS, M.D.

Mexico, D. F.

Extrapleural pneumothorax was attempted a good many years ago, but it was soon forgotten. Now it has come back and attention has been focused on it again; it should be rated as the most modern advancement of collapse therapy in pulmonary tuberculosis. Most of its authors predict a brilliant future for it.

The development and exposition of this therapeutic method is owed principally to the following workers: Walter Graf of the Coswit Sanatorium, Heidelberg; Hautefeuille and Dreyfus Le Foyer of France, and Rhodes of England.

Extrapleural pneumothorax, following Schmidt's denomination, or subfascial pleur-olysis, to use Graf's nomenclature, has for its basis the freeing of the diseased, adherent lung by separating it from the chest wall by following the plane of "cleavage" between the parietal pleura and the endothoracic fascia.

Once separated from the walls of the hemithorax, the organ collapses on account of its retractibility. The space created by the shrinking of the lung is naturally filled by outside air; subsequently, the necessary degree of collapse is maintained by insufflation of gas at proper intervals of time.

Extrapleural pneumolysis was first practised by Tuffier in 1891 to extirpate a tubercular centre on the apex. According to Hautefeuille and Dreyfus, in 1910 Tuffier conceived the idea of maintaining the artificially produced pneumothorax space in shape with insufflations of gas, but soon abandoned the idea in favor of the injection, or grafting, of suitable substances.

Since Tuffier and Baer's time, extrapleural pneumolysis has been limited to the apex of the lung and paraffin substances, fatty or muscular tissues are used as filling material.

The first to praise extrapleural pneumothorax for treating pulmonary tuberculosis with cavitation was A. Mayer in 1913. He, according to Sauerbruch, said that it was suf-

\* Delivered at Philadelphia, Pa., on February 20th, 1939 before the Pennsylvania Chapter of the Pan-American Medical Association.

ficient to separate all the lung with the parietal pleura from its adjacent parts and fill the resulting cavity with nitrogen. Sauerbruch, in 1922, also remarked: "This method merits no attention at present."

In 1932, Vissen put into effect this advance in the surgical treatment of pulmonary tuberculosis and, according to our information, was the first to present patients who had undergone a thorough extrapleural pneumolysis in whom the air space thus created was maintained for several weeks by subsequent injections of air.

Also in 1932, Jachia practised extensive extrapleural pneumolysis, recommended that it be complete and pointed out that the cavity filled itself spontaneously with air and spilt blood. To increase the collapse, he advised, in some instances, the use of lipiodol and homologous blood.

In 1933, Omodei Zorini practised simple apicolysis, without any filling substances, but his results were not very satisfactory.

In 1934, Aguilar of Argentine published the details of 5 cases of extrapleural pneumothorax in which the results were not satisfactory because of the small degree of collapse effected.

It was not until 1936 and 1937 that extrapleural pneumothorax acquired real therapeutic value, thanks to its use in more carefully selected cases and on a more extensive scale. The work of the authors I previously mentioned is worthy of remembrance; Graf, Adelberger, Schmidt, Mauser, Hautefeuille and Dreyfus Le Foyer.

Up to this point, we considered extrapleural pneumothorax as a combined medical-surgical process, for while the procedure was surgical, the after care was medical.

The so-called medical extrapleural pneumothorax was put into practice later; the work of Lefevre and Gan, Coulaud and Barbier and Torra of Turin should be mentioned here. The following method was used by these workers: They employ a simple Kuss needle, of short bevel and fine caliber, to avoid emphysema as much as possible. A point in the intercostal space is selected and the needle is inserted at the upper costal border to a depth of two to four millimeters, depending on the thickness of the thoracic wall of the subject. Under strong pressure, 8 to 10 c.c.

of 1 per cent novocain solution is injected. In this manner, a pocket of fluid pushing back the pleura is formed. The syringe is then disconnected, a stilette is introduced in the needle and the resistant pleural membrane is recognized. Next, 50 to 60 c.c. of physiological serum is injected; this procedure is usually difficult and painful to the patient. The stilette is again introduced in the needle to determine to what extent the resistant membrane has been pushed away from its previous depth; this serves as an index to the amount of displacement of pleura achieved by the injection. After that the gas is injected. This requires considerable pressure.

The frequency and amount of later injections are determined by x-ray examinations of the patient.

Pain, a sensation of oppression, subcutaneous emphysema and haemorrhage may mar the procedure and should be avoided by careful technique.

The method is indicated in lesions of the middle part of the lungs in which the presence of adhesions contraindicates intrapleural pneumothorax. It should never be attempted in lesions of the apex and bases.

I have had no experience with medical extrapleural pneumothorax and confess that the method does not appeal to me. To me, this seems a very difficult way to produce and maintain pneumothorax.

I will pass on to the details of surgical extrapleural pneumothorax.

Before undertaking the operation, the physician should, by appropriate tests, determine that the subject shows satisfactory renal and hepatic function and normal coagulation and bleeding time.

Some workers, as Bourgois and Mario Lebel, prefer a general anesthetic and use cyclopropane.

The majority of the experimenters, I amongst them, prefer a local anaesthetic. A small dose of morphine is injected subcutaneously. Half an hour later the skin, subcutaneous tissues and the muscles are anesthetized with a half of one per cent solution of novocain with adrenalin. An incision of these tissues is made and the second, third, fourth and fifth intercostal nerves are anaesthetized with five centimeters of the



same solution for each nerve.

Some authors place the patient in a sitting position, as do Aldeberger, Olivier, Monod and Garcia Bengochea. But the majority, including myself, place the patient on the healthy side (decubito), as in thoracoplasty.

One can operate through the anterior, the axillary or the posterior wall of the chest. As the greater part of the lesions are high and at the back and as the surface of the back wall is more easily reconstructed, the posterior wall incision is usually to be preferred. All my cases have been operated through the back.

The operative procedure is as follows: An incision, ten to fifteen centimeters long is made equidistant from and parallel with the vertebrae margin of the scapula and the vertebrae column with the center at the level of the spine of the scapula. The incision is made through the skin, the subcutaneous cellular tissue, the trapezius and the rhomboid. Bleeding is controlled by appropriate measures; I use electrocoagulation. From ten to twelve centimeters of the third rib is removed by subperiosteal resection. At times, it is necessary to resect a smaller portion of the fourth rib also.

The intercostal muscles and the blood vessels in the region of the third rib are sectioned. The corresponding intercostal nerve is identified and anaesthetized. This nerve is a very important landmark, for just subjacent to it is the fascia endothoracic in which the pneumolysis is to be done. The nerve is sectioned and the pneumolysis is begun by means of Pean's forceps or scissors, to be continued and completed with the fingers.

Schmidt's technique, just described, was later modified by Coryllos who advised sectioning the tendons of the para-vertebral muscles from the second to the fifth rib after previous ligation of the blood vessels, so that these tendons might be used to advantage to solidly rebuild the chest wall at the posterior end of the incision in the intercostal muscles.

The pneumolysis should be made with great care in all directions. The extent of the collapse should be in accord with previous radiographic study undertaken to delimit the extent of the pathological process. As a general rule, the collapse should extend upwards to the third rib, downwards to the sixth, out-

wards to the axillary region and inwards to the mediastinum.

During the pneumolysis, bleeding is controlled by means of sponges on the long clamps.

As the pneumolysis is subfascial, in most cases, the ligaments of Sebilan and Zucherkandl should not interfere with the collapse. If, on account of pathological conditions, the collapse is not possible or dangerous, it is better not to insist on the extrapleural pneumothorax and to do a thoracoplasty instead.

Finally, after a careful examination for bleeding points, the layers are reconstructed as perfectly as possible. I am not in the habit of using drainage as Schmidt advises. Graf uses and advises the leaving of a Petzer probe.

The extrapleural pneumothorax completed, we must next concern ourselves about the most delicate part of the undertaking: the maintenance of the collapse.

Most frequently, for the first days after the operation, the extrapleural space created is found filled with a serohaemorrhagic fluid. As a general rule, this liquid should be aspirated and replaced by air.

The technique of the injections of air is similar to that used in intrapleural pneumothorax, but here the procedure nearly always calls for the use of a larger needle or a trocar. Repeated radioscopic examinations keep one informed about the size and shape of the extrapleural space. Manometric oscillations are less reliable than intrapleural pneumothorax. Greater pressure is needed to introduce the air, usually between twenty plus and thirty plus; the amount insufflated is from two to three hundred cubic centimeters. On the other hand, the gas is absorbed slower than in intrapleural pneumothorax.

The results of the method are not definitely established; the method is relatively new and needs more time to prove or disprove its usefulness. There is no agreement in the available statistics, but, in general, French, German, and English authors and, recently, American workers have shown great optimism.

Graf and Schmidt do not charge any deaths to the method, at least not in a direct way; they have used it on many hopeless cases and do not blame the method for fatal results in such instances.

The two main indications for the method

are: first, second degree cavities (Jacquero's classification), in which intrapleural pneumothorax has failed; second, lesions located in the upper parts of the lungs.

These fundamental indications made possible the following concrete considerations:

1. In cases with cavities of the apex, unsuitable for intrapleural collapse, if partial thoracoplasty is done on one side and extrapleural pneumothorax on the other, the results are less dangerous and are tolerated better than bilateral thoracoplasty.

2. It is suited in bilateral cases, in which one side has been treated by intrapleural pneumothorax, in which the extrapleural pneumothorax respects the healthy part of the parenchyma, a thing which does not always happen in the bilateral intrapleural pneumothorax.

3. Coryllos has employed it for asthmatic tuberculosis with the object of strictly collapsing the diseased parts only and not reducing needlessly the patient's breathing capacity.

4. It is indicated in bilateral cases with *empyema* on one side.

5. It may be used as a complementary method for incomplete and inefficacious intrapleural pneumothorax.

6. It may well be used on cases that are waiting for a *thoracoplasty*, even if such cases have gigantic third degree cavities. Since extrapleural pneumothorax is not very traumatizing and in nearly all cases is followed by noticeable improvement, both local and general, it makes the patient a better risk for an operation of the magnitude and importance of a *thoracoplasty*.

7. As the so-called substitution extrapleural pneumothorax, it may be used in those cases where intrapleural pneumothorax was undertaken, but had to be abandoned because of the parietal and visceral pleural surfaces becoming fused by inflammatory processes.

#### Cases

1st. A. C. R., 21 years old, male, Fibrocasseous tuberculosis of both upper lobes. Three Koch bacilli per field in the sputum. Left intrapleural pneumothorax was tried several times, unsuccessfully, and therefore a left intrapleural pneumothorax with Schmidt's technique was practiced. Post-operative pro-

gress—satisfactory. In the first x-ray picture we can see the anatomico-clinical form already mentioned, but we must point out the presence of a destructive left infraclavicular lesion and the small cavities in the same region. In the second x-ray you will notice the extrapleural cavity seen filled below by sero-hematic fluid, this being usually the case after the operation; you can also see the noticeable reduction of the left destructive lesion and the fusion of the small cavities on the right which were transformed into a single *Espe-lunca*. In the third x-ray we notice the lessening of the extrapleural space, as the patient presented after each re-insufflation phenomena which brought to mind those of gas emboli, and for this reason we had to abandon this treatment; the slight increase of the left cavity and the same state in the right lung. The state of the patient is very satisfactory; his weight increased 11 kilos, no fever, attenuation of local symptom, but with positive sputum.

2nd. P. S., male, 24 years old. Ulcero-casseous form of the left apex, positive sputum. Intrapleural pneumothorax was applied four times, ineffectually because of marked pleural adhesions. Extrapleural pneumothorax according to the technique described above was performed. Post-operative progress, satisfactory. The first x-ray demonstrated the lesion mentioned above. The second x-ray shows the large extrapleural space produced, with the usual flow of the sero-hematic liquid and disappearance of the lesions. The third x-ray shows the same state insofar as the pneumothorax and the lesions are concerned; also, disappearance of the sero-haemorrhagic fluid. All the pathologic manifestations have disappeared and the sputum is negative. The practice of weekly insufflations is continued; these are easy to perform, taking from 150 to 200 centimeters of air.

3rd. C. A. M. V., male, 21 years old. Fibrocasseous lesions of the right upper lobe, with a great destructive infraclavicular lesion. Positive sputum, four germs per field. He was treated unsuccessfully by intrapleural pneumothorax, adhesions on the upper lobe interfering with the collapse. He was operated according to Schmidt's technique. Post-operative progress was uneventful. The first x-ray shows the lesions mentioned above and a

small inferior intrapleural pneumothorax. The second x-ray was lost, but showed a good extrapleural pneumothorax with the disappearance of the cavity. The third x-ray demonstrates the lessening of the pneumothorax due to reinsufflation difficulties; a doubtful image of *espelunca*, which was not filled with the bronchographic method. The patient is in good condition and his sputum, repeated several times was negative.

4th. J. C., male, 21 years old. Extensive ulcero-casseous bilateral form. Positive sputum. A bilateral intrapleural pneumothorax was applied, ineffective on the right, and successful on the left. He was therefore operated on the right side according to Schmidt's technique. The post-operative progress was unsatisfactory; high temperature for ten days, painful, sore scar and the drainage of sero-purulent fluid through one side of the scar. The first x-ray shows the above mentioned lesions. The second x-ray shows the left intrapleural pneumothorax and the lesions on the right without modification. The third x-ray shows the intrapleural pneumothorax on the left; and the extrapleural pneumothorax on the right, with an opaque shadow, caused by the sero-purulent contents of the space. The patient has improved, but the infection of the extrapleural cavity has made injection of oil into the space necessary, but to date the infection has not been relieved. Some sputum examinations have been negative, and others, while positive, show a great lessening of the number of germs per field.

5th. C. L. L., male, 22 years old. Fibrocasseous lesions of both apices. Positive sputum. Intrapleural pneumothorax was successfully applied to the left side; but failed when applied to the right side; the right phrenic was sectioned, but without success. Therefore, we performed extrapleural pneumothorax on the right side. The first x-ray shows the left intrapleural pneumothorax; the lesions on the right side; and a slight ascent of the right side of the diaphragm. The second x-ray shows the right extrapleural cavity, with a dark shadow due to the presence of liquid and a lessening of the lesions which called for the operation. The third x-ray demonstrates a lessening of the space produced; a small amount of liquid in the lower part and an improvement of the lesions. The patient

has improved, but the sputum continues being positive.

6th. R. F., male, 20 years old. Presents extensive bilateral fibrocasseous lesions, especially on the right side. Positive sputum. Was operated on the right side, according to Schmidt's technique. Post-operative progress, without any incidents. The first x-ray gives us an idea of the preoperative lesional state. The second x-ray demonstrates ostensibly an ample extrapleural pneumothorax with serohaemorrhagic fluid. The patient is quite well now, showing a general improvement. The sputum has been negative on several occasions and at other times shows a small number of bacilli.

7th. M. J., male, 24 years old. Extensive bilateral anatomico-clinical fibrocasseous form, large left infraclavicular cavities. Sputum strongly positive. Left extrapleural pneumothorax, showing favorable post-operative progress. The first x-ray gives us an exact idea of the preoperative state of the lesion of the patient. The second x-ray shows the extrapleural pneumothorax with a slight drainage and the *espelunca* quite reduced. The third x-ray is similar to the second. The patient has improved in all his manifestations and the sputum shows few Koch's bacilli.

8th. Y. P., male, 27 years old. Extensive bilateral fibrocasseous lesions. Sputum positive for tubercle bacilli. A superior right thoracoplasty was first performed. This was followed by an extrapleural pneumothorax on the left side. No post-operative complications. The first x-ray was taken after the thoracoplasty and before the pneumothorax; it shows the lesions that necessitated the latter operation. The second x-ray shows a good extrapleural pneumothorax with sero-hematic fluid; the cavity on the left cannot be seen. The patient now shows a noticeable improvement and the latest two sputum examinations have been negative.

### Conclusions

1st. The procedure of extrapleural pneumothorax is not dangerous.

2nd. The procedure is feasible for obtaining selective collapse.

3rd. Some of my cases have been completely cured, others have improved, but I confess that I am talking of interventions too recent



to enable me to say the last word about them as yet.

4th. An ample collapse must be performed to facilitate measures for the maintenance of the extrapleural space. I believe successful maintenance depends on this factor and not, as Graf asserts, on the "cleavage" being made precisely between the parietal pleura and the endothoracic fascie, instead of between the former and the thoracic wall.

5th. As the phthisiologists are convinced of the importance of collapse therapy, we are obliged to give all our attention to a new method that promises to enrich the already fertile territory for the treatment of tuberculosis.

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## Evaluation of Different Techniques in Obtaining Gastric Specimens for Examination for the Presence of Tubercle Bacilli

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EVERY once in a while a diagnostic method is discovered which can be used in a two-fold measure. The examination of the gastric contents for the presence of tubercle bacilli, in patients suffering with pulmonary tuberculosis, can be used as a diagnostic procedure, and as a check during the treatment.

In 1898, Neunier of Paris, having difficulty in obtaining satisfactory sputa specimens from very young children suffering from pulmonary tuberculosis, decided to investigate the stomach contents for the presence of tubercle bacilli.

He reasoned, and rightfully so, that very young children, being unable or not knowing how to expectorate, would swallow their sputa and if this sputa were collected on a fasting stomach, would on examination show the presence of tubercle bacilli, if there.

When we take into consideration that the x-ray was not as perfected as it is to-day and that the diagnosis of pulmonary diseases was made mostly on physical findings, it is not surprising that Neunier claimed 80 per cent positive gastric results.

Armond-Delille following up Neunier, re-

ported 174 cases of children suffering with pulmonary tuberculosis who had positive gastrics. His method for obtaining the gastric specimens, only differed slightly from that practiced by Neunier. After an eight to ten hour fast, he introduced the regulation stomach tube, introducing 80 c.c. of tepid water and immediately siphoning it off. This was then examined for tubercle bacilli.

In 1927, Vibert of Paris, published his method of homogenization of the gastric contents of patients with pulmonary tuberculosis, making the finding of the tubercle bacilli easier. He used the same method as Neunier and Armond-Delille for obtaining the specimens.

He centrifugalized the specimen over a long period of time. The precipitate was carefully collected in a porcelain dish and 30 c.c. of distilled water was added. To this was added 10 drops of a normal Sodium Hydroxide solution, and the whole heated for ten minutes, while 50 c.c. of distilled water was added by the drop method during the heating process. If the Sp.g. was over 1.004, a little alcohol was then added. This was again centrifugalized for forty-five minutes and the precipitate was examined for tubercle bacilli by the Ziehl-Nielson method. It is of interest to note that the gastric specimens can be kept for two to three days without the tubercle bacilli being destroyed.

Armond-Delille and Vibert, reported 30 per cent positive gastric findings by this method when all else was clinically negative. They stress the importance of this method to determine the presence of the tubercle bacilli in patients who are being treated by pneumothorax.

Gourdy at Livermore, in 1934, reported 47.4 per cent of positive gastrics in a series of fifty-nine children with pulmonary tuberculosis, having a positive Mantoux. Of these fifty-nine cases, nine were negative to x-ray findings and had no clinical symptoms other than a positive Mantoux.

Poulsen in 1931, claimed that in his series of cases, in spite of negative x-rays, he was still able to make a diagnosis of pulmonary tuberculosis by proving a positive gastric. He claims the reason for a negative x-ray, negative clinical findings and a positive gastric, is, that there can be present cavities so small

that they can not be detected on the x-ray film, nor produce clinical symptoms, yet due to their anatomical placement, are emptying infective material, which, being swallowed by the patient, can be detected in the stomach contents.

In *The American Review of Tuberculosis* of 1934, there is published a table of comparable findings of gastric examinations of patients with pulmonary tuberculosis, by different workers in this field, and though they vary in their findings, still prove of great value.

	Year	Cases	Percent Positive
Armond-Delille	1927	110	51
Poulsen	1929	15	80
Zambrano	1931	50	20
Clausen	1934	53	41
Standinchenk & Cohen	1936	600	30

In all the above cases, these men practically used the same technique for obtaining the gastric specimens. The only variations were the quantities of tepid water used just before siphoning off of the stomach contents.

It is my belief that the varying results are due to the different quantities of water used at the time of obtaining the specimens, plus the method used for determining the presence of the tubercle bacilli.

The technique used to obtain the gastric contents of patients having, or suspected of having, pulmonary tuberculosis in this series of cases, is entirely different from that used by Neunier or those following him, who adhered to his original method, though they may have modified it slightly at the time of obtaining the specimen.

All specimens are collected the first thing in the morning, or as near the waking time of the patient as possible. In doing this, I group my cases into (a) ambulatory, and (b) non-ambulatory. The same preparatory instructions are given to all patients.

1. Complete restriction of all foods and fluids after 7 p. m. the night before, until the gastric contents have been obtained. Infraction of this rule interferes with the proper evaluation of the findings.

2. On awakening, the patient is not allowed to brush his teeth, rinse his mouth, nor

drink a drop of water, prior to having his stomach contents aspirated. In this manner, we obtain a concentrated accumulation of everything the patient has swallowed during his sleep, plus any infective material that may be present in the stomach.

In all bed-patients, the stomach contents are obtained on awakening or within ten to fifteen minutes at most.

In the ambulatory cases, the patient by special appointment is requested to appear as soon as possible after he awakens, in order to aspirate as much of the accumulated infective material as possible. We never use the regulation stomach tube, nor do we inject any tepid water while in the process of getting the stomach contents, therefore, we have an undiluted and concentrated specimen to examine.

A Lavine or Rehfuess tube is passed into the stomach, and with a Luer syringe, 30 to 50 c.c. of the concentrated gastric contents is aspirated for examination for tubercle bacilli. It is my opinion, that a specimen obtained by this method, will give a better evaluation of actual conditions present, than a diluted one obtained by the older method. If there are few tubercle bacilli present in the stomach contents, then, by diluting the specimen, it stands to reason, that it would be more difficult to prove their presence and a splendid chance to overlook them altogether. On the other hand, no matter how few bacilli may be present, the very fact that the gastric contents is undiluted, assures the findings of the germ in a greater percentage of cases.

In order to prove the greater value for obtaining the concentrated specimen rather than the diluted one by the older method, I wish to submit the following report of fifty cases carefully studied over a period of years.

In testing the comparative value of both methods, both techniques were used in this series of cases. When the older method was used, 100 c.c. of tepid water was injected into the stomach each time before siphoning off the specimen.

In both groups, all patients had to follow the same preparatory instructions outlined in this article.

A patient would one day have the newer

method used for obtaining the stomach contents, then on the following day, the same patient would have the old orthodox method used to obtain the gastric specimen. I wish to reiterate that, when the older method was used 100 c.c. of tepid water was injected into the stomach as a standard dilutant. In this manner, I was able to compare the value of both techniques.

In this series of cases, the gastric contents for examination for the presence of tubercle bacilli as a diagnostic measure, in cases of pulmonary tuberculosis, was not used for the simple reason, that all these patients had their diagnosis already established prior to coming under my supervision and were being treated by pneumothorax. Realizing the value of this procedure as a check during the treatment of pulmonary tuberculosis, I used it as a control, in ascertaining the value of both the treatment and the test.

The specimens of all patients were examined (a) by the slide method, and if found negative, then (b) the culture growth and the guinea pig inoculation was done to make certain whether or not the treatment was efficacious or whether there still was present tubercle bacilli and further therapy was necessary. It is my contention, that to get accurate data on patients with pulmonary tuberculosis, several examinations of gastric specimens, plus all three laboratory procedures are necessary. Especially is this true with patients being treated with pneumothorax.

The following report of the examinations of the stomach contents for the presence of tubercle bacilli in this series of cases while being treated with pneumothorax, is as follows:

1. The specimens collected by the older method where 100 c.c. of tepid water was used as a dilutant, showed a 12 per cent positive finding of the tubercle bacilli.

2. The specimens collected by the newer or more concentrated method, showed a 20 per cent positive finding of the tubercle bacilli; an increase of 8 per cent over the older method, showing the advantage of the more concentrated technique for obtaining the stomach contents in cases of pulmonary tuberculosis for examination to ascertain the presence of the tubercle bacilli, both as a diag-



nostic measure, and as a check to ascertain the value of the therapeutic measures used in the treatment at the time.

#### Conclusion

1. The examination of the stomach contents for the presence of tubercle bacilli is a very important factor, both as a diagnostic procedure and as a check during the treatment, in all cases of pulmonary tuberculosis, and especially where pneumothorax is instituted.

2. All three laboratory procedures in the examination of gastric specimens are essential, especially if the slide method proves negative.

3. Repeated examinations are necessary to get accurate data during the course of treatment.

4. The concentrated, or newer method for obtaining the gastric contents in cases of

pulmonary tuberculosis, is far preferable to the older method, and gives a greater percentage of positive findings in the presence of tubercle bacilli, even in minimum numbers.

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## Pneumonia Control Program in St. Louis\*

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**P**NEUMONIA is a major cause of death in St. Louis. This city has had one of the highest pneumonia mortality rates among the major cities in the United States. These two facts, alone, are sufficient reason for the Health Division's interest in securing an effective program for the reduction of Pneumonia deaths. Not having any specific methods for the prevention of the incidence, we are compelled to emphasize the prevention of deaths with recognized specific measures for cure. We are in the same position regarding Pneumonia as we were regarding Diphtheria some twenty-five years or more ago. Then we relied upon antitoxin for cure and had no toxoid for prevention. The real problem in Pneumonia still remains, namely, an effective preventive agent against Pneumonia. As a result of the interest and wholehearted cooperation of the State Health Commissioner and the United States Public Health Service, St. Louis was supplied with certain

types of Pneumococcus Serum for the typing and treatment of Pneumonia. In addition, some personnel was furnished to aid in the project.

St. Louis was selected as one of the seven cities in the United States, primarily, to make a study of the type incidence of Pneumococcus Pneumonia. This information is fundamental in any program. The obligation of the Health Division was to organize a program and to insure uniformity in laboratory procedure throughout and to see that all information was collected in a uniform manner so that it would lend itself to statistical analysis in all of the areas participating. This obligation was assumed by the Health Division. Furthermore, we were to distribute type specific serum to all physicians, provided they complied with the regulations of filling in the necessary data on the forms provided for all cases.

With the administrative details completed and standard forms adopted, our first problem was to get the support of the laboratories in adopting standard procedure for uniformity in pneumococcus typing. The Health Di-

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vision furnished these laboratories with specific typing sera from one source. These same laboratories agreed to send the specimens, with their findings, after they completed their examinations, to the Health Division laboratory for check purposes. They also agreed to send their laboratory personnel to the Health Division laboratory again for the purpose of uniformity in procedure. The Health Division furnished standard collection outfits for sputum, throat and blood cultures. The cooperation of the laboratories, as a whole, was most encouraging. Our observations up to this time show that further improvement is necessary, however, before we can be satisfied with our efforts to obtain the maximum efficiency for uniformity in the laboratory typing of pneumococci. The enthusiasm and splendid cooperation of the laboratories has markedly improved our laboratory usefulness in Pneumonia Control in St. Louis.

With the laboratory procedure well organized, we then enlisted the Medical Profession's interest in the program. They agreed to send specimens to the laboratories for typing, agreed to furnish the necessary data on all cases and receive therapeutic serum for specific types 1-2-4-5-7-8 and 14 from one source, just as the laboratories receive typing sera from one source—from the Health Division. All of the sera furnished by the Health Division was horse serum. Another source was available, however, from a private agency, which was rabbit serum. This enabled us to study the two simultaneously.

The St. Louis Medical Society and the Mound City Medical Society, together with the medical schools and hospitals, and the profession, as a whole, responded most enthusiastically. More pneumococcus typing has been done in St. Louis in the past six months than in all the years previously; and this was done during a pneumonia season which was the lowest in the history of St. Louis. The Health Division laboratory, alone, examined 2313 specimens from 1218 cases submitted by 123 physicians. That type of cooperation is something for which we can be justly proud. The maximum number of specimens previously examined any year was less than 80.

Our observations, however, lead us to believe that some physicians still think of Pneumonia too much in terms of morbid an-

atomy instead of bacteriology. An impression is gained that typing and serum therapy is not indicated in broncho-pneumonias, or post-operative pneumonia, etc. We must definitely think of pneumonia as an infectious disease with a specific bacteriological etiology. Only when that idea is thoroughly understood by all physicians, including surgeons, can we hope to reduce pneumonia mortality to a minimum. Typing is indispensable in pneumonia control, no matter what specific therapy may be used. A failure to appreciate and to put into practice pneumonia typing and the proper and adequate use of specific sera, or other specific methods, is responsible for many pneumonia deaths. Regardless of whether or not the pneumonia cases may be considered terminal or not, they should be typed. Improvement in this respect is indicated by the fact that 410 cases of pneumonia were not typed, of which 253 died and 157 recovered. Failure to attempt to type all cases of pneumonia is inexcusable in the light of our experiences today. We should know what type of pneumococcus is responsible for every pneumonia death or whether some other organism played the role in the end.

With the laboratories organized and the medical profession provided with the necessary implements for typing, specific serum available to all patients, we next prepared the public with the program. We wanted them to consult the physician early in respiratory infections and informed them on what was available. The newspapers and radio aided splendidly in this part of the program.

The first objective of the program to determine type incidence of *Pneumococcus Pneumonia* was accomplished. The prevalent types were determined for St. Louis for the first time on a large scale. It is true the results are obtained only through one Pneumonia Season and when our morbidity and mortality reports were the lowest in the history of the city. The most prevalent types were:

Type 1	19.1%
Type 3	13.0%
Type 8	8.1%
Type 5	5.5%
Type 4	5.3%
Type 6	4.5%
Type 7	4.0%
Type 2	3.6%

Sixty-three and one-tenth per cent of the types were in the first 8. All types were found scattered throughout the rest of the 32 types, with the exception of 27-28 and 31. No cases were found in these three mentioned types. In several cases multiple types were found.

Results of specific therapy were next studied. The Pneumonia program began November 15, 1938. Statistical information is available on 1128 cases of reported Pneumonia—all classes. The general fatality rate was 35.1 per cent. Of the 768 cases of Pneumonia, where sputum was sent to the laboratories for typing, 82.5 per cent showed specific type Pneumococci. Specific type serum was available for Types 1-2-4-5-7-8 and 14. The program hardly was under-way when Pyridine became available in limited amounts through private sources. A few cases were also treated with Sulphanilamide.

Regardless of the age, the stage of the disease, complications other than Pneumonia and insufficient dosage Types 1-2-4-5-7-8 and 14 *Pneumococcus Pneumonia* show the following results with specific serum—Pyridine and no specific treatment.

	Cases	Deaths	Fatality rate
Serum	186	28	13.0%
Pyridine	28	3	9.7%
No Specific Therapy	49	14	22.2%

For comparison we have all types of *Pneumococcus Pneumonia* regardless of age, the stage of the disease, complications other than Pneumonia and insufficient dosage not receiving type specific serum, but receiving Pyridine or Sulphanilamide and no specific treatment:

	Cases	Deaths	Fatality rate
Pyridine	72	16	18.3%
Sulphanilamide	27	5	15.6%
No Specific Treatment	173	51	22.8%

This is the severest and most critical analysis that could be charged against specific therapy. Yet, the results justify specific therapy. More careful analysis shows that of the failures in Serum treatment for *Pneumococcus Pneumonia*, six cases were due to late treatment, insufficient treatment and other complications than Pneumonia. Corrected serum rates—making allowance for these factors—reduces the rate to 10.5 per cent.

There is no preference shown, therefore, between Specific Serum and Pyridine in the types where specific serum was available taken as a whole; Types 1-2-4-5-7-8 and 14. Of the other types there would seem to be some benefit from Pyridine and Sulphanilamide.

The use of either horse or rabbit serum in the series showed no preference as judged from the mortality records. Both were equally effective. Two factors on effectiveness of serum seemed important, namely, early administration of serum and adequate dosage. Not all of the types seemed equally responsive to serum. Types 1 and 2 seemed to have had the best results. Type 5 was next. The least responsive were Types 4, 7, 8, and 14. Type 8 was resistant to Pyridine, while all of the others seemed responsive, namely 1-2-4-5-7 and 14. The only deaths were 3 out of 6 cases in Type 8. The other 28 cases had no deaths. This would seem to indicate the further use of Pyridine in Types 1-2-4-5-7 and 14. Serum seemed more effective in Type 8. The necessity for typing is obvious no matter what specific therapy is to be studied.

The effect of early serum treatment is suggested in a series of home-treated cases, all ages:

	Cases	Deaths	Fatality rate
Type 1	21	0	
Type 2	1	0	
Type 4	3	0	
Type 5	5	1	
Type 7	3	1	
Type 8	5	0	
Type 14	0	0	
Total	38	2	5.2%

Home-treated cases, no specific therapy, 11 cases—no deaths. Of 49 home-treated cases for Types 1-2-4-5-7-8 and 14, only 2 died—fatality rate 4 per cent.

The high percentage of Type 1 with early administration of serum may be the explanation for this most favorable record for home-treated cases.

Age is a most important factor when judging any specific therapy, as shown in general pneumonia statistics and in evaluations in specific therapy. Of 396 deaths from Lobar and Broncho Pneumonia, since the program started, November 15, 1938, 42 deaths were



under 15 years of age. There were 50 deaths between 15 and 45 and 304 deaths between 45 and 75 and over. In other words, 76 per cent of the deaths are over 45 years of age and 24 per cent under 45 years of age. And this 24 per cent is about equally divided between 0 to 15 years; and 15 years to 45 years; in other words about 12 per cent of all Pneumonia deaths are under 15 years of age.

Results of specific serum treatment under 15 years of age for Types 1-2-4-5-7-8 and 14-44 cases—with one death. Fatality rate 2.2 per cent; all ages 13 per cent; over 15 years of age 18.8 per cent. Pyridine, all types, under 15 years of age—34 cases—with 2 deaths—fatality rate 5.9 per cent. Pyridine cases over 15 years of age—53 cases—14 deaths—fatality rate 26.4 per cent. All ages—all types—18.3 per cent. Children under 15 years of age, no specific treatment Types 1-2-4-5-7-8 and 14—22 cases—2 deaths—fatality rate 9 per cent. All types under 15 years of age—86 cases—7 deaths—fatality rate 8.1 per cent. Type specific serum would appear to be somewhat more effective than Pyridine in children under 15 in Types 1-2-4-5-7-8 and 14; fatality rate much lower in children under 15 years

of age than in adults.

Color and the results in serum treated cases show—white 11.5 per cent; Colored 19.4 per cent. The fatality rates appear higher among the colored than the white.

We have attempted to give you a sketchy picture of the Pneumonia Program in St. Louis, which was inaugurated last November. All figures obtained were during a period when the Pneumonia rate was the lowest in the history of the city. The prevalent types, of course, have been determined for only one season. The figures on the results of treatment have been on a small series of cases. Further studies must, of necessity, be continued over a period of years, but the results so far certainly justify our increased interest. Certainly, specific serum and Chemo-Therapy have merited a place in the reduction of our death rate. They must be further utilized and we must further continue our studies on the various types of Pneumonia. We concentrate on the reduction of deaths by specific therapy during the period of patient expectation for the discovery of a real preventive measure for Pneumonia as we have for Diphtheria.

## Prospects for Tuberculosis Control Among Negroes\*

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IN NEW ORLEANS, there are 336,000 white people and of these 215 died last year of pulmonary tuberculosis; there are also 155,000 Negroes of whom 275 succumbed to the same disease in 1938. Since this is what happens each year, these figures justify serious consideration. Why do the Negroes lose more people from tuberculosis when they number less than one half the white population? It would appear that the colored mortality rate is twice that of the whites. Actually it is even higher than this. By critical treatment of statistics it can be shown that the Negro death rate is nearly four times the white; i.e., the average Negro living in New Orleans has

four times as much chance of dying of tuberculosis as has his white neighbor.

This is hardly a new observation; it applies not only to this city and to the South, but also to the country at large; it is a national problem. Epidemiologists have long sought the reason and in general present two somewhat conflicting causes for this discrepancy, the one genotypic and the other environmental. Proponents of the former believe that Negroes die of tuberculosis in large numbers because this is a disease of civilization, and Negroes have lived in the congestion of modern life too short a time to have developed the inherent immunity acquired by the white man through many centuries of intimate contact ("tuberculization") and subclinical association with the disease. Those who favor the second theory teach that tuberculosis is a dis-

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ease of the overworked and the underprivileged and that when society will provide for the Negro conditions comparable to those of his white neighbor, there will no longer continue to exist any marked differences between the races.

*Does the Negro Lack "Innate" Resistance?*

It has long been known that tuberculosis develops rapidly among people who as a group come in contact with it for the first time. These so-called "primitive peoples" (American Negro, American Indian and Mexican peon) have not lived many centuries in the crowded manner assumed by the white peoples of Europe hundreds of years ago. When white people with presumably high acquired resistance to tuberculosis settle among such groups, they introduce the disease and it spreads as by epidemic. Only lately was it even suspected that possibly these "primitive peoples" succumb in such numbers because of poor hygiene and not because of lack of acquired resistance.

If it be true that the Negro has some inherent defect of constitution and cannot build up the sort of resistance which enables the white man to recover, most of our scheme of prevention is wasted. If we must await the slow development of "natural immunity" through the centuries, untold numbers of Negroes will have died of tuberculosis and will have caused the infection, disease and death of equal numbers of white members of the same community. In the present state of congestion and complexity of life, tubercle bacilli find fertile fields among all strata. If, on the other hand, it is true that the Negro dies so easily of tuberculosis because he lives perpetually amidst surroundings that do not favor his recovery from the disease, we can hope to do something about it. By adequate measures, some of the factors preventing him from leading a reasonably healthy life can be removed.

Fortunately, there is abundant reason to believe that the latter approach more nearly approximates the truth. We should be guilty of wishful thinking if we accepted this concept merely because it suggests a solution in keeping with current trends of social planning. There are, however, bits of evidence, direct and indirect, which support this second

concept.

The studies of Morton Kahn on the Bush Negroes of British Guiana furnish direct evidence. These primitive jungle dwellers are direct descendants of slaves who escaped into the wilds of Guiana early in the eighteenth century and established a tribal mode of existence which is followed even today. In the jungles they found a habitat which is not very much different from the one of their birth in Africa. Kahn tested 800 of these Bush Negroes and found that only a very small number of them reacted to tuberculin. Each one of the reactors had been in contact with a family of tuberculous white settlers of a nearby village. No one of these reactors had any clinical manifestations of the disease. Kahn concluded that tuberculosis did not spread in epidemic fashion when introduced into these representatives of a "primitive people" because they lived under circumstances which for them were ideal. This, he pointed out, is in direct contrast to the unfavorable environmental circumstances of every other "primitive people" studied; especially is this contrast marked when the reaction of the Bush Negro is compared with that of the American Negro.

Of indirect evidence, there is plenty. The Negro death rate from tuberculosis is much lower than it was a quarter of a century ago; in its fall, it has paralleled the sharp decline of the white death rate. Because this has been so constant and so striking a finding, uniformly present in all communities studied, it is only fair to conclude that whatever is saving white people is also operating to decrease the Negro's chances of dying of tuberculosis. It is known that the death rate among Negroes treated today in most institutions for the tuberculous is not so high as it was 25 years ago. The cause of this decline in general morbidity and mortality for tuberculosis in all parts of the population is now being debated. Some authorities hold modern treatment responsible, others attribute the decline to the segregation of patients and closing of cavities by collapse therapy. There is no question that this is followed by beneficial results on the community at large. Such cavity closing lessens dissemination of tubercle bacilli and thereby prevents the massive infections which formerly were responsible for untold numbers

of deaths.

Others have pointed out that the incidence of tuberculosis began to fall nearly a century ago when the great crusades for public health were instituted, that as slums were cleared, drainage systems improved, epidemic diseases brought under control by appropriate sanitation procedures, working conditions generally improved and nutritional deficiencies largely corrected, there was a sharp decrease in the death rate from all diseases and a corresponding decline in the tuberculosis mortality. It was very clearly demonstrated that whatever makes people healthier in general also increases their "natural immunity" to tuberculosis.

#### *How Can This Control be Accomplished?*

If we can accept this premise, we have something tangible with which to begin. If the tuberculosis death rate is only one quarter of what it was a century ago because we have better living conditions and more adequate systems of prevention and treatment, it ought to be possible to lower this death rate even more. Tuberculosis viewed in this light becomes the social disease of most prominence. We need not debate the respective theories of lowering incidence of morbidity and mortality from tuberculosis; it is universally agreed that all factors are of value and must be considered in formulating any plan to eradicate the disease. We may state in general that we can exercise specific and non-specific measures in such a program.

The non-specific measures, you, as social workers, know quite well. We need social planning in the broadest sense of the term. So long as more treatment facilities for the tuberculous are needed, these alone are not sufficient. Yours is the task to see that the environmental conditions of all the less fortunate strata of society are improved. It is generally recognized that services to a tuberculous patient do not stop when he is brought to a sanatorium or a clinic; that they must extend to his dependents and to him through the period of rehabilitation. It is not recognized well enough that by improving the living conditions of a segment of society destined to have more than its share of tuberculosis, we may prevent the disease from making such terrific inroads. The Negro of

today has as much likelihood of dying of pulmonary tuberculosis as had the white man of the community 25 years ago. He is today a quarter-century behind his white neighbor. To bring him to a proper level, it is imperative that we concentrate on efforts to improve his living conditions. I have no doubt that such projects as the improved housing facility recently begun in this city will eventually contribute most magnificently to this. It will reduce that portion of the Negro death rate caused by overcrowding in poorly ventilated and inadequately lighted living quarters.

#### *The Need for Education*

The more specific of these approaches, that of dealing with tuberculous patients and their attendants, has already been followed in New Orleans. At the Flint-Goodridge Hospital there has been elaborated a plan for tuberculosis control. Obviously, only a small part of the tuberculous population can be affected by the measures undertaken there, but it does serve as a beginning. In brief there are three phases to this plan: treatment of patients, professional training and community awakening.

It is well admitted that we lack adequate facilities for treating tuberculous Negroes of this community. Because of this appalling lack of beds, a pneumothorax clinic was established at this hospital 3 years ago. Utilizing the plan followed so successfully in the East and the Mid-West, it has been possible for patients to be treated in the clinic whereas otherwise they would have had to await their turns to enter existing sanatoria facilities. Since usually most patients had hopelessly advanced disease by the time of admission, little or nothing could be done for them, and the false belief in the incurability of tuberculosis in the Negro was furthered. Patients are kept in bed at Flint-Goodridge Hospital only 48 hours after induction of artificial pneumothorax and are then sent home to be visited by a field nurse. At regular intervals, these patients report to the clinic for "refills" of air and are seen between visits by the nurse or, if necessary, by a physician. It can be truthfully stated that lives have been saved by this method, lives which undoubtedly would have been lost for lack of treatment if these patients had merely waited



to be admitted to an institution. It is hopeful to note that the lead thus established has been followed in the Shreveport Clinic and more recently in the Charity Hospital at New Orleans.

The second phase of the Flint-Goodridge program is that of educating professional personnel. Medical schools of the past decade did not offer sufficient teaching in tuberculosis to their students; attempts are now being made to correct this by postgraduate instruction. Only one in touch with the actual situation can appreciate how meager have been the opportunities of the Negro physician for postgraduate instruction in anything, especially in tuberculosis. Since they do not generally have access to tuberculosis wards, the educational policy of the Flint-Goodridge Hospital has been directed to the training of resident and staff physicians. They are given opportunities for working in the pneumothorax clinic, studying methods of diagnosis and treatment and for acquiring the technic of performing pneumothorax. It is hoped by this method eventually to provide a group of young practitioners capable of furnishing adequate medical service for their respective communities.

Another interesting project is the annual course of instruction for staff members. It covers a period of 8 months, lectures and demonstrations twice a month alternating with similar instruction in syphilis control. The course is comprehensive and "practical," stress being laid on procedures the men will need in daily contact with patients. Each registrant is supplied gratuitously with tuberculin for testing private patients, and all positive reactors have chest films at no cost to themselves. In this manner, several cases of tuberculosis were uncovered this year, but—and this is far more important—several Negro physicians were for the first time in their professional careers using tuberculin tests and chest x-rays for their private patients. A third feature of the educational policy is the annual summer session given for 2 weeks and including lectures and demonstrations on tuberculosis as part of a general medical program. These sessions are well attended by Negro physicians from several southern states.

The third phase of the Flint-Goodridge

plan is that of community awakening. Whenever a diagnosis of tuberculosis is made, the field nurse visits the home to talk with all members of the household. By regular and repeated visits, all contacts are brought to the clinic for examination. In addition, the nurse acquaints the members of the family with the diagnosis, leaves literature and invites them to come to the clinic for conferences. Every effort is made to co-operate with state and voluntary agencies promoting health campaigns in general and tuberculosis campaigns specifically. Our hope is to show members of the Negro community that their people will be saved from tuberculosis only when there is coordination of these many activities which appear to have very little direct bearing on their own health. That these campaigns have attracted interest is indicated by the fact that several Negro fraternal organizations have sponsored meetings to carry such propaganda to their membership.

#### *Are Our Efforts Justified?*

These, then, are some of the measures to attempt control of tuberculosis in the Negro. The outlook is most inviting, but by no means is the task a simple one. If we are content merely to regard the declining death rate complacently, then we shall be overlooking the fact that relatively small though the death rate may be in comparison to what it was before, it is still a factor of grave economic importance. The prospects for control of tuberculosis among the Negro are indeed excellent if we intensify our efforts to provide for him in ever-increasing volume those things which have been shown by experience to be capable of eventually reducing tuberculosis to a foe much less formidable than it now is. Contrary to teachings of a past generation of clinicians, it is now known that Negroes can be arrested of their tuberculosis just as surely as white people under the same circumstances.

If we provide for the Negro adequate treatment facilities, substantial professional training, improved working and decent environmental conditions—in short, if we remove him from the category of the underprivileged and the overworked—then the prospects for control of tuberculosis among his people are certainly the equal of those for his white neighbor.

## HISTORY OF THE TUBERCULOSIS INSTITUTE OF COOK COUNTY AND CHICAGO

(Continued from the Mississippi Valley States Issue;  
Vol. V., No. 10, October, 1939)

1917—When Mrs. James Britton became director of the Social Service Department of Cook County in 1917, one of the first things she did was to employ a nurse. The demands were so heavy however that additional workers were needed. Mrs. Britton appealed to the Institute to help out. The first Institute nurse was employed and began her work March 19, 1917, and in 1918, 3 more nurses were sent out into the county. During the influenza epidemic in the winter of 1918, the Institute nursing staff in Cook County was increased to 10 nurses. All of these nurses were under the direction of Miss Harriet Fulmer. The communities in the county were urged to raise sufficient funds to employ their own nurses. Many communities responded to this call so that instead of the one nurse employed by the County Board in 1917, by 1919 there were 4 nurses employed by the County Board and 16 by the Chicago Tuberculosis Institute, various county towns numbered 13 nurses, making a total of 33 nurses employed in the county in 1919. The Institute now has 18 Health Centers established in Cook County and a nursing staff of 25 nurses who give service to 35 towns in Cook County.

At a meeting of the Executive Committee of the National Tuberculosis Association, held in Pittsburgh, Penna., on January 11, 1919, the Illinois Tuberculosis Association asked to have the Chicago Tuberculosis Institute made a separate and independent organization since its work was so vastly different from that of all the other affiliated organizations in Illinois. This was approved by the Executive Committee of the National Tuberculosis Association making the Chicago Tuberculosis Institute a separate and independent organization outside of the jurisdiction of the Illinois Tuberculosis Association giving the Chicago Tuberculosis Institute the same rating as a State Association.

1925—Dr. Herman N. Bundesen introduced in the City Council, December 24, 1925, an ordinance requiring that every farmer who shipped milk to the City must have his herd tested and supply the Department of Health with a Certificate showing that his herd was free from tuberculosis.

1927—A Survey of certain health activities in Cook County outside of Chicago was made by the Chicago Tuberculosis Institute in 1927 under the direction of Miss Lucile Robey. This survey covered 81 municipalities and 25 townships having rural territory.

1930-35—The CTI endowed for a period of 5 years, the Theodore B. Sachs Memorial at the University of Illinois for training of senior medical students in tuberculosis. This contribution has continued since that date with the approval of the Board of Directors of the Chicago Tuberculosis Institute.

Recognizing the importance of research in tuberculosis, the Institute has for a number of years devoted a part of its funds to this program, contributing to the National Tuberculosis Association \$5,000.00 a year for Research, work that

was carried on at the University of Chicago and other places.

The Institute in 1930 and 1931 contributed to the Committee of the Central Placement Service for the Handicapped in their program of placement of the "arrested" case of tuberculosis in positions.

In 1930, \$10,000 was contributed to the Governor's Relief Fund to provide for free meals for children of the unemployed in the schools to be dispensed by the Board of Education under the direction of a committee and in 1931 an additional contribution of \$2,000 was made.

On March 30, 1930 a Mexican Health Center was opened and maintained until May 1934 in one of the most congested districts of Chicago. Its purpose was to provide clinic service and health education for the large number of Mexicans living in Chicago. Serious difficulties due to the differences in language and customs were obviated by a staff of Spanish speaking people. Posters displayed in the Health Center were printed in Spanish as well as literature for distribution. Dr. Alberto L. De Guevara was the Medical Director and Dr. Francesca Luna was his assistant. During the depression, many Mexicans left Chicago so that the problem was not so acute and the Center was closed. All records were turned over to the Municipal Tuberculosis Sanitarium.

In January 1933, the Institute began a tuberculin testing survey in the Chicago High Schools, tuberculin testing 26,000 students. This part of the work was turned over to the Municipal Tuberculosis Sanitarium in 1937, the Institute contributing \$40,000 to this work during the next two years.

During 1935, at the request of the Institute, a survey was made to outline the tuberculosis problem among the Negroes of Chicago. The survey was made by Marian Nelson of the National Tuberculosis Association for the Chicago Tuberculosis Institute.

1937—In June of 1937, the Board of Directors of the Chicago Tuberculosis Institute voted to change the name of the organization to The Tuberculosis Institute of Chicago and Cook County in order to more clearly define the territory covered by the organization.

During the last few years, the Institute has been developing all activities previously started and adding new ones as the need arises. Among a few of the newer activities might be mentioned free distribution of tuberculin to physicians in Cook County to aid them in the diagnosis of tuberculosis and the creation of a Teaching Center which has been started in Maywood to provide field practice for students taking post graduate courses in Public Health Nursing at Loyola University.

Since 1908 the work of this organization has been supported through the sale of Christmas Seals and contributions made by communities in Cook County where the Institute conducts its programs.

## Organization News

### OKLAHOMA REPORTS TUBERCULOSIS COMMITTEE

The Governor of the American College of Chest Physicians for Oklahoma reports that the following Tuberculosis Committees have been established in Oklahoma by the State and County Medical Societies:

#### *State Committee*

Robert M. Shepard, M.D., Tulsa, Governor of the American College of Chest Physicians, *Chairman*; F. P. Baker, M.D., Talihina and Floyd J. Moorman, M.D., Oklahoma City. All three members of the committee are Fellows of the American College of Chest Physicians.

#### *Twenty Counties Organized*

Dr. Shepard reports that twenty county medical societies in Oklahoma have set up tuberculosis committees in conformity with the Pennsylvania Plan as sponsored by the American College of Chest Physicians, and we list the members of the committees below:

— 1939 —

#### *State of Oklahoma*

#### *County Tuberculosis Committees*

##### *Atoka-Coal Counties*

Dr. J. S. Fulton, Atoka, Oklahoma.

Dr. J. B. Clark, Coalgate, Oklahoma.

##### *Blaine County*

Dr. Ben P. Clark, Chairman, Okeene, Okla.

Dr. Robert O. Ryan, Canton, Oklahoma.

##### *Cleveland County*

Dr. D. G. Willard, Chairman, City Natl. Bank Bldg., Norman, Oklahoma.

Dr. Ben Cooley, Norman, Oklahoma.

Dr. F. C. Buffington, Norman, Oklahoma.

##### *Craig County*

Dr. J. B. Darrough, Chairman, Vinita, Okla.

Dr. Lloyd McPike, Vinita, Oklahoma.

Dr. W. R. Marks, Vinita, Oklahoma.

##### *Custer County*

Dr. W. C. Tisdal, Chairman, Clinton, Okla.

Dr. Ross Deputy, Clinton, Oklahoma.

##### *Hughes County*

Dr. A. L. Davenport, Chairman, Holdenville, Oklahoma.

Dr. H. A. Howell, Holdenville, Oklahoma.

Dr. C. A. Hicks, Wetumka, Oklahoma.

##### *Kay County*

Dr. Merl Clift, Chairman, Blackwell, Okla.

Dr. G. S. Kreger, Tonkawa, Oklahoma.

Dr. L. G. Neal, Ponca City, Oklahoma.

##### *Leflore County*

Dr. Earl Woodson, Chairman, Poteau, Okla.

Dr. W. L. Shippey, Poteau, Oklahoma.

Dr. G. R. Booth, LeFlore, Oklahoma.

##### *Lincoln County*

Dr. C. W. Robertson, Chairman, Chandler, Oklahoma.

Dr. Ned Burleson, Prague, Oklahoma.

##### *Logan County*

Dr. R. F. Ringrose, Chairman, Guthrie, Oklahoma.

Dr. W. W. Mead, Guthrie, Oklahoma.

##### *Muskogee County*

Dr. Joel T. Woodburn, Chairman, Surety Building, Muskogee, Oklahoma.

Dr. Fred G. Dorwart, Barnes Building, Muskogee, Oklahoma.

##### *Oklahoma County*

Dr. Floyd Moorman, Chairman, 1200 N. Walker, Oklahoma City, Okla.

Dr. W. H. Butler, 1200 N. Walker, Oklahoma City, Okla.

Dr. P. M. McNeill, Medical Arts Building, Oklahoma City, Okla.

Dr. L. J. Moorman, 1200 N. Walker, Oklahoma City, Okla.

Dr. Bert E. Mulvey, Medical Arts Building, Oklahoma City, Okla.

##### *Osage County*

Dr. Divonis Worten, Chairman, Pawhuska, Oklahoma.

Dr. R. A. Smith, Hominy, Oklahoma.

Dr. R. O. Baylor, Fairfax, Oklahoma.

##### *Ottawa County*

Dr. Wiley Chestnut, Chairman, Miami, Okla.

Dr. P. B. Hampton, Commerce, Oklahoma.

Dr. H. C. Ritchey, Picher, Oklahoma.

##### *Payne County*

Dr. E. O. Martin, Chairman, Cushing, Okla.

Dr. C. M. Bassett, Cushing, Oklahoma.

Dr. John Hackler, Stillwater, Oklahoma.

##### *Pittsburg County*

Dr. Will C. Wait, Chairman, McAlester, Oklahoma.

Dr. R. K. Pemberton, McAlester, Oklahoma.

Dr. E. Shuller, McAlester, Oklahoma.

##### *Pottawatomie County*

Dr. D. W. Gillick, Chairman, Shawnee Indian Sanatorium, Shawnee, Oklahoma.

Dr. G. S. Baxter, American Natl. Building, Shawnee, Oklahoma.



## DISEASES OF THE CHEST

Dr. J. E. Hughes, 14 E. 9th St., Shawnee, Oklahoma.

*Stephens County*

Dr. C. B. Waters, Chairman, Duncan, Okla.  
Dr. L. P. Smith, Marlow, Oklahoma.  
Dr. E. G. King, Duncan, Oklahoma.

*Wagoner County*

Dr. Francis Crane, Chairman, Wagoner, Oklahoma.  
Dr. J. H. Plunkett, Wagoner, Oklahoma.  
Dr. S. R. Bates, Wagoner, Oklahoma.

*Washington County*

Dr. F. S. Etter, Chairman, Bartlesville, Okla.  
Dr. R. C. Gentry, Bartlesville, Oklahoma.  
Dr. L. P. Vansant, Dewey, Oklahoma.

## NEW MEXICO REPORTS TUBERCULOSIS COMMITTEE

The Governor of the American College of Chest Physicians for New Mexico reports that a Tuberculosis Committee has been appointed for the first time by the New Mexico Medical Society. LeRoy S. Peters, M.D., Albuquerque, Governor of the College has been made chairman of the committee. The other members of the committee are: Wm. A. Gekler, M.D., Albuquerque and Carl Mulky, M.D., Albuquerque.

REGENT OF COLLEGE ELECTED  
VICE PRESIDENT OF N.T.A.

Paul H. Ringer, M.D., Asheville, North Carolina, Regent of the American College of Chest Physicians for District No. 4, comprising the states of Florida, Georgia, North Carolina, South Carolina, and Virginia, was elected a Vice President of the National Tuberculosis Association at their annual meeting held at Boston this year.

REGENT OF COLLEGE ELECTED  
PRESIDENT ELECT OF  
AMERICAN TRUDEAU ASSOCIATION

Lewis J. Moorman, M.D., Oklahoma City, Oklahoma, Regent of the American College of Chest Physicians for District No. 7, comprising the states of Arkansas, Missouri, and Oklahoma, was elected President Elect of the American Trudeau Association, which takes the place of the reorganized American Sanatorium Association.

FELLOWS OF COLLEGE ATTEND MEETING  
OF SOUTHERN TUBERCULOSIS  
CONFERENCE

The following Fellows of the American College of Chest Physicians who are officers of the Southern Tuberculosis Conference met at Charleston, South Carolina, October 4-6: Wm. Atmar Smith, M.D., Charleston, South Carolina, President; H. Frank Carman, M.D., Dallas, Texas; Paul H. Ringer, M.D., Asheville, North Carolina; and J. D. Riley, M.D., State Sanatorium, Arkansas. Leo F. Hall, M.D., State Park, South Carolina, a Fellow of the American College of Chest Physicians, presented a paper at the meeting entitled, "The Management of Pulmonary Tuberculosis." The South Carolina Tuberculosis Association met on October 4th at the *Fort Sumter Hotel*, Charleston, in conjunction with the Southern Tuberculosis Conference. Mrs. D. McLeod McDonald of Columbia is the Executive Secretary of the South Carolina Tuberculosis Association.

MEXICO CONDUCTS POSTGRADUATE  
COURSES IN TUBERCULOSIS

Donato G. Alarcón, M.D., Mexico City, Mexico; Governor of the American College of Chest Physicians for Mexico announces that a series of lectures and clinics were conducted by the Tuberculosis Sanatorium staff during the months of September and October. This Post Graduate course is a regular annual feature of the sanatorium staff and of the public health officials of Mexico. All of the Fellows of the American College of Chest Physicians in Mexico City participated in the preparation and presentation of the program. Demonstrations and lectures were given for thoracoplasty, pneumothorax, pneumoperitoneum, phrenicectomy and other surgical procedures.

DR. CARL SEMB ELECTED  
FELLOW OF COLLEGE

Carl B. Semb, M.D., Oslo, Norway, has been elected a Fellow of the American College of Chest Physicians. Dr. Semb will serve as the Governor of the College for Norway. Other Governors of the College serving in foreign countries are: Juan Tanca Marengo, M.D., Guayaquil, Ecuador, Governor for the Central

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American Countries; Johareal Gosh, M.D., Calcutta, India, Governor for India; John Herbert Blackburn, M.D., Queensland, Australia, Governor for Australia; and Donato G. Alarcón, M.D., Mexico City, Mexico, Governor for Mexico.

#### NEW FELLOWS OF THE COLLEGE

The following physicians have been admitted as Fellows of the College during the months of September and October:

Dr. Simon Peter Bittner, Glendale, Calif.  
 Dr. Robert Claude Foster, Whipple, Arizona.  
 Dr. Oscar Carl Heyer, Edwardsville, Illinois.  
 Dr. August George Hofferkamp, Sanator, South Dakota.  
 Dr. S. Edwin Hughes, Jr., Tujunga, Calif.  
 Dr. Kellie Nicholas Joseph, Birmingham, Ala.  
 Dr. George D. Kettlekamp, St. Louis, Missouri.  
 Dr. Smith J. Mann, Washington, D. C.  
 Dr. Harvey L. Murdock, Fort Wayne, Indiana.  
 Dr. Wm. Newcomer, Towson, Maryland.  
 Dr. Esther Rosencrantz, San Francisco, Calif.  
 Dr. Carl Boye Semb, Oslo, Norway.

#### FELLOWS OF COLLEGE ON PROGRAM

The following Fellows of the American College of Chest Physicians were speakers on the program of the Missouri State Tuberculosis Society which was held at St. Joseph, Missouri, September 15th: H. I. Spector, M.D., St. Louis; E. E. Glenn, M.D., Springfield; and Raymond H. Runde, M.D., Mt. Vernon, Missouri.

#### EXHIBIT AT THE STATE MEETING OF PENNSYLVANIA MEDICAL SOCIETY

The Committee on Tuberculosis of the Pennsylvania State Medical Society arranged an exhibit at the state meeting held at Pittsburgh, October 2nd-5th. The subject matter was, "Early Diagnosis and Advances in the Treatment of Pulmonary Tuberculosis." Full size roentgenograms were shown in view boxes of bronchography, pneumothorax, pneumoperitoneum, thoracoplasty, and intrapleural pneumolysis. Activities of the county tuberculosis committees of the medical societies were shown on the wall space.

#### ROUND TABLE MEETING

The Tuberculosis Committee of the Indiana State Medical Society sponsored a Round Table meeting in connection with the meeting of the State Medical Society held at Ft. Wayne, Indiana, October 10-12.

Same was a dinner meeting held at the Irene Byron Sanatorium on the evening of October 10th, from 5 to 7:30 p. m., and the following program was presented:

##### *Round Table Symposium:*

- "Modern Methods of Treatment," J. V. Pace, M.D., Superintendent, Rockville Sanatorium.
- "Tuberculosis in Young Adults," J. H. Stygall, M.D., Chairman, Anti-Tuberculosis Committee of the Indiana State Medical Association.
- "Tuberculin Surveys," Paul D. Crimm, M.D., Superintendent, Boehne Tuberculosis Hospital, Evansville.

*X-ray Conference*, led by M. H. Draper, M.D., Medical Director, Irene Byron Sanatorium.

There were about 40 physicians attending the dinner.

#### PAPERS READ BY FELLOWS OF THE COLLEGE

At a meeting of the Chicago Laryngological and Otological Society held on October second, Dr. Chevalier L. Jackson of Philadelphia read a paper on "Surgical Treatment of Cancer of the Larynx."

At a meeting of the Dauphin County Medical Society held at Harrisburgh, Pennsylvania, Dr. Ross K. Childerghose delivered a paper on the "Diagnostic Features and Modern Medical Treatment of Tuberculosis." Also at the same meeting, Dr. William Devitt, past-president of the College, read a paper on "Surgical Treatment of Tuberculosis."

On September 22nd, when the Third District Branch of the Medical Society of the State of New York held its annual meeting, Dr. George G. Ornstein of New York City read a paper on the "Diagnosis of Carcinoma of the Lung."



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